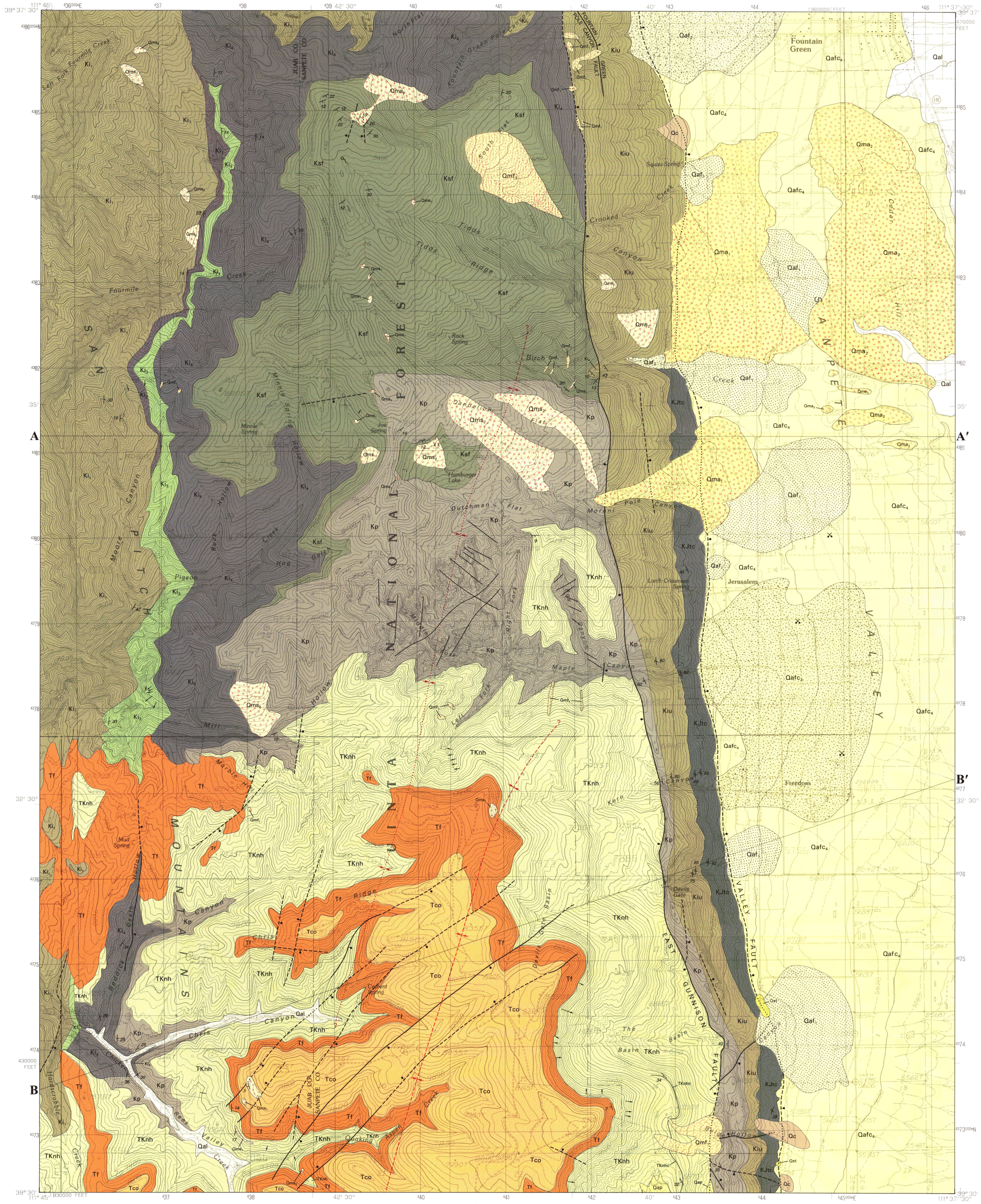
UTAH GEOLOGICAL SURVEY
a division of
UTAH DEPARTMENT OF NATURAL RESOUCES

Plate 1
Utah Geological Survey Miscellaneous Publication 95-1
Geologic Map of the Fountain Green South Quadrangle



Base from U.S.G.S. Fountain Green South Quadrangle, Provisional Edition, 1988

The Miscellaneous Publication series provides an outlet for authors who are not Utah Geological Survey staff. Not all aspects of this publication have been reviewed by UGS.

SCALE 1:24 000

1 0 1 MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10 000 FEET
1 .5 0 1 2 KILOMETERS
1000 0 1000 2000 METERS

CONTOUR INTERVAL 40 FEET
SUPPLEMENTAL CONTOUR INTERVAL 20 FEET

Field work by author, 1988
Cartography by J. Parker

13°40′ E
243 MILS
1995 MAGNETIC NORTH DECLINATION AT CENTER OF MAP

UTAH
QUADRANGLE LOCATION

1	2	3	1 Nephi 2 Fountain Green North 3 Big Hollow 4 Levan 5 Moroni 6 Chris Canyon 7 Wales 8 Chester
4		5	
6	7	8	

ADJOINING 7.5' QUADRANGLE NAMES

GEOLOGIC MAP OF THE FOUNTAIN GREEN SOUTH QUADRANGLE, SANPETE AND JUAB COUNTIES, UTAH

by
Alan W. Fong
1995

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Plate 2
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Geologic Map of the Fountain Green South Quadrangle

DESCRIPTION OF MAP UNITS

QUATERNARY UNITS

Qal — Alluvium-- *Poorly to moderately sorted silty clay to cobble-sized material deposited in active streams and washes.*

Qst — Spring tufa-- *Tan, calcareous tufa with streaks of charcoal and carbonaceous sand.*

Qc — Colluvium-- *Unconsolidated material deposited at the foot of slopes; moderately sorted; reflects local lithologies.*

Qma_1 — Younger rock-avalanche debris-- *Similar to older rock-avalanche debris; remobilized or deposited during the wet period of 1983-1985.*

Qma_2 — Older rock-avalanche debris-- *Very poorly sorted, cobbles to boulders up to 25 feet (8 m) in diameter deposited at the base of steep chutes; Pleistocene to Holocene in age.*

Qmf_1 — Younger debris-flow deposits-- *Similar to older debris-flow deposits; remobilized or formed during the wet period of 1983-1985.*

Qmf_2 — Older debris-flow deposits-- *Poorly sorted silt and clay with minor coarser material that flowed as a viscous fluid; Pleistocene to Holocene in age.*

Qms_1 — Younger landslide deposits-- *Similar to older landslide deposits; remobilized or formed during the wet period of 1983-1985.*

Qms_2 — Older landslide deposits-- *Very poorly sorted, boulder- to clay-sized material with a hummocky surface morphology; Pleistocene to Holocene in age.*

Qaf_1 — Younger alluvial fans-- *Similar to older coalesced alluvial fans; four ages of alluvial-fan deposits are distinguished by relative position; the youngest alluvial fans are presently active.*

Qaf_2 — Older alluvial fans-- *Similar to older coalesced alluvial fans.*

$Qafc_3$ — Younger coalesced alluvial fans-- *Similar to older coalesced alluvial fans.*

$Qafc_4$ — Older coalesced alluvial fans-- *Fine- to coarse-grained alluvial deposits with a fan morphology deposited in the valley near the mountain front; coarser materials present near the mountains and finer materials dominate the distal parts; includes some loess deposits.*

Qap — Pediment-mantle alluvium-- *Poorly sorted, clay to angular boulder deposits blanketing an elevated, erosional surface.*

BEDROCK UNITS

Tco — Colton Formation-- *Gray to orange mudstone, limestone, sandstone, and siltstone; sparse gastropods and pelecypods.*

Tf — Flagstaff Formation-- *White and gray limestone (silicified and fossiliferous in some places), mudstone, shale, sandstone, conglomerate, and bentonite; oncolites and gastropods.*

TKnh / TKnhc — North Horn Formation-- *Yellow, pebbly sandstone at base; varicolored conglomerate, pale orangish-tan sandstone, and gray mudstone. Coal member (TKnkc) consists of grayish-orange micrite and coal.*

Kp — Price River Formation-- *Varicolored, polymodal, clast-supported conglomerate with orange to gray sandstone; absence of limestone pebbles and cobbles.*

Ksf — South Flat Formation-- *White and pink sandstone with interbeds of micrite, carbonaceous shale, and carbonaceous mud.*

Kiu — Indianola Group undifferentiated-- *White to red sandstone and conglomeratic sandstone.*

Ki_4 — Indianola Group, unit 4-- *Varicolored, polymictic, polymodal, clast-supported conglomerate with subordinate sandstone and shale; abundant limestone pebbles and cobbles.*

Ki_3 — Indianola Group, unit 3-- *Varicolored conglomerate with minor arkose and sandstone.*

Ki_2 — Indianola Group, unit 2-- *Green glauconitic sandstone with minor limestone and shale.*

Ki_1 — Indianola Group, unit 1-- *Varicolored conglomerate with sandstone; limestone pebbles and cobbles in upper part.*

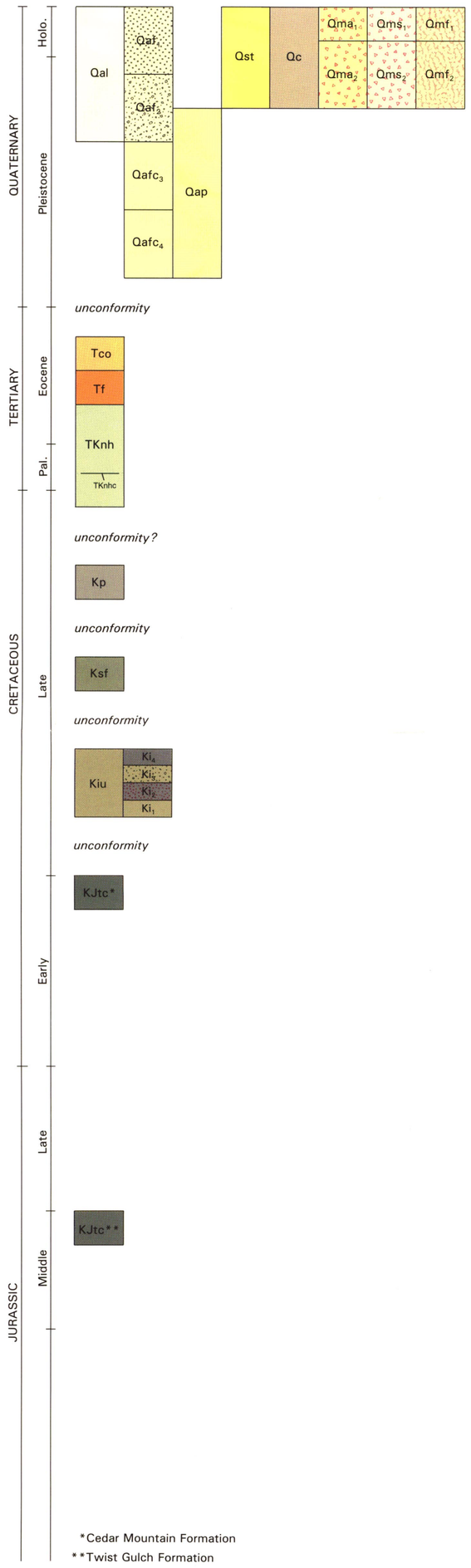
KJtc — Twist Gulch Formation and Cedar Mountain Formation, undivided-- *Brown, white, red, and gray calcareous sandstone, siltstone, mudstone, and minor gritstone; undivided because of poor exposures.*

Ja — Arapien Shale-- *Shown only on the cross section.*

MAP SYMBOLS

- Contact
- Major unconformity (shown on cross section only)
- Normal fault-- *Dashed where approximately located, dotted where concealed; bar and ball on downthrown side.*
- Joint or fracture
- Syncline axial trace-- *Dashed where approximately located; dotted where concealed.*
- Coal prospect pit
- Gravel or road fill pit
- Strike and dip of bedding (inclined, vertical, overturned) — 34 / 62
- Spring
- Landslides, debris flows, and slumps (too small to map separately)

CORRELATION OF MAP UNITS



LITHOLOGIC COLUMN

SYSTEM	SERIES/ STAGE	FORMATION		SYMBOL	THICKNESS feet (meters)	LITHOLOGY
QUATERNARY	Pleistocene to Holocene	Unconsolidated deposits		Q	0-250 (0-75)	
		Spring tufa		Qst	60+ (18+)	
TERTIARY	Eoc.	Colton Formation		Tco	220 (66)	
	Paleocene to Eocene	Flagstaff Formation		Tf	40-930 (12-280)	
		North Horn Formation		TKnh	0-3,100 (0-940)	
		Coal member		TKnhc	0-40 (0-12)	
CRETACEOUS		Price River Formation		Kp	0-800 (0-240)	
	Maastrichtian	South Flat Formation		Ksf	0-2,826 (0-860)	
	Turonian to Campanian	Indianola Group	(West) (East)	Kiu	400-3,000 (120-900)	
			Unit no. 4 / Undifferentiated	Ki_4		1426 (435)
			Unit no. 3 / Undifferentiated	Ki_3		0-1,000 (0-300)
			Unit no. 2 / Undifferentiated	Ki_2		0-200 (0-60)
			Unit no. 1 / Undifferentiated	Ki_1		1,500 (450)
JUR.		Twist Gulch and Cedar Mountain Fms., undivided		KJtc	850-900 (260-270)